

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
13 January 2005 (13.01.2005)

PCT

(10) International Publication Number
WO 2005/003481 A1

(51) International Patent Classification⁷: E04C 2/04, E04B 1/04

(21) International Application Number:
PCT/HR2003/000034

(22) International Filing Date: 2 July 2003 (02.07.2003)

(25) Filing Language: English

(26) Publication Language: English

(71) Applicant (for all designated States except US): MARA-
INSTITUT D.O.O. [HR/HR]; Varazdinska 65, Martijanec,
42232 Donji Martijanec (IIR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SKENDZIC, Milo-
van [IIR/IIR]; Irvatskih pavlina 12, 42250 Lepoglava
(HR). SMRCEK, Branko [HR/HR]; Branimirova 24,
42202 Trnovec (HR).

(74) Agent: DIDAK, Vinko; B. Magovca 15, 10010 Zagreb
(HR).

(81) Designated States (national): AE, AG, AL, AM, AT (uti-
lity model), AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA,
CH, CN, CO, CR, CU, CZ (utility model), CZ, DE (uti-
lity model), DE, DK (utility model), DK, DM, DZ, EC, EE
(utility model), EE, ES, FI (utility model), FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN,
MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD,
SE, SG, SK (utility model), SK, SL, TJ, TM, TN, TR, TT,
TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

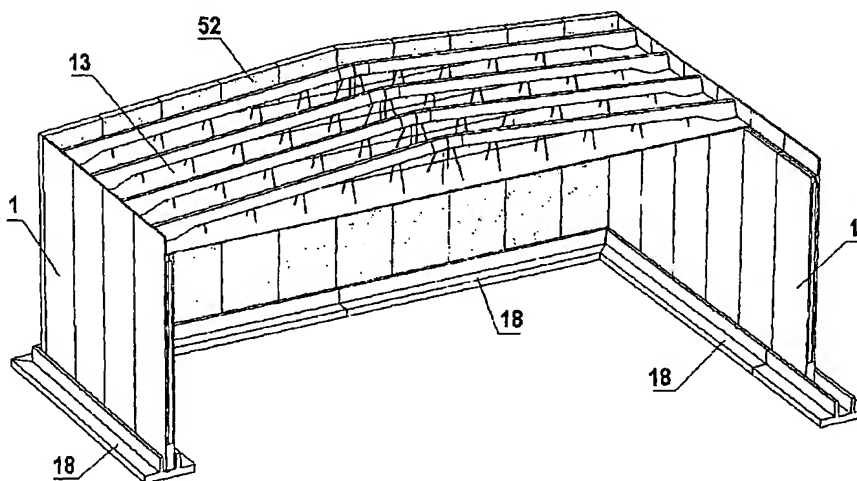
(84) Designated States (regional): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK,
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: CONSTRUCTING THE LARGE-SPAN SELF-BRACED BUILDINGS OF COMPOSITE LOAD-BEARING WAL-
PANELS AND FLOORS



(57) Abstract: The large span buildings comprising no ordinary beams and columns are formed of vertical load-bearing composite wal-panels and composite floors, both comprising two concrete layers interconnected by steel strip webs. The stiff horizontal plane formed of assembled roof/ceiling units, supported by wal-panels, connected to both gables restrains transversal movement of lon-
gitudinally arranged wal-panels attached tops, bracing them simultaneously against sideway and lessening their buckling lengths. Floors, if any applied, being rigidly connected to the vertical panels additionally improve stability of the global structure. Hereby
invented composite wal-panel and floor are adapted to the same purpose. The global structure, being braced in that way, behaves as
a rigid box made of slender panels.

WO 2005/003481 A1